DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027286
Date Inspected: 06-Mar-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: L & M Industrial Fabrication

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Tangent, Oregon

CWI Name:	Tom Dreyer			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☑ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower Chimney Parapet

Summary of Items Observed:

This Quality Assurance (QA) Inspector, Art Peterson arrived at L & M Industrial Fabricators between the times noted above to randomly observe Quality Control (QC) personnel monitor the welding operations performed by L & M personnel on the fabrication of tower chimney parapet walls. The following observations for the extra work being performed to the following contract change order were:

CCO: 196 - Description: Construct parapet walls at the Tower Heads

East Tower Chimney Parapet:

This QA Inspector randomly observed L & M welder Jake Schuld (Welder ID #17) performing the flame cut operation on top plate- (A14d) of the A14- Wall of the East Tower Chimney Parapet as per Contract Drawing Sheet No. 800S8R1 of 1204 "Parapet Wall at Tower Head Details No. 4". The purpose of the flame cutting on the top plate is to provide the clearance for installation of the 75 mm diameter A354 Grade BD bolt when the tower outrigger beam is in the extended position.

The flame cut operation was completed on the top plate of the A14 parapet wall and the workmanship on this date appeared to be in general compliance with the contract specifications.

West Tower Chimney Parapet:

This QA Inspector randomly observed L & M welder Bradford Schroyer (Welder ID #16) performing the flame

cut operation on top plate- (A14d) of the A14- Wall of the West Tower Chimney Parapet as per Contract Drawing Sheet No. 800S8R1 of 1204 "Parapet Wall at Tower Head Details No. 4". The purpose of the flame cutting on the top plate is to provide the clearance for installation of the 75 mm diameter A354 Grade BD bolt when the tower outrigger beam is in the extended position.

The flame cut operation was completed on the top plate of the A14 parapet wall and the workmanship on this date appeared to be in general compliance with the contract specifications.

This QA Inspector randomly observed L & M welder Jake Schuld (Welder ID #17) performing the complete-joint-penetration (CJP) corner-joint single bevel groove weld operation per the Flux Cored Arc Welding (FCAW-G) gas shielding process in the (3G) vertical position connecting exterior wall plate- (A15b) to base plate- (A15a) on the West Tower Chimney parapet wall.

This QA Inspector observed QC Inspector Tom Dreyer verify prior to the start of the fillet weld operation, that the minimum preheat temperature as per the approved WPS was established and afterwords; verified that the welding parameters (Amps, Volts and Travel Speed) were in accordance with WPS-D1.5-FC-TC-U4b-GF-3G using Hobart Excel Arc E71T-1 (.052") diameter electrode.

The welding operation was still in-process on this CJP groove weld and the workmanship on this date appeared to be in general compliance with the contract specifications.

This QA Inspector also randomly observed L & M welder Bradford Schroyer (Welder ID #16) performing the fillet weld operation per the Flux Cored Arc Welding (FCAW-G) gas shielding process in the (2F) horizontal position connecting stiffener plates- (A13e and A13f) to wall plate- (A13b) on the West Tower Chimney parapet wall.

This QA Inspector observed QC Inspector Tom Dreyer verify prior to the start of the fillet weld operation, that the minimum preheat temperature as per the approved WPS was established and afterwords; verified that the welding parameters (Amps, Volts and Travel Speed) were in accordance with WPS-D1.5-FC-006-2F using Hobart Excel Arc E71T-1 (.052") diameter electrode.

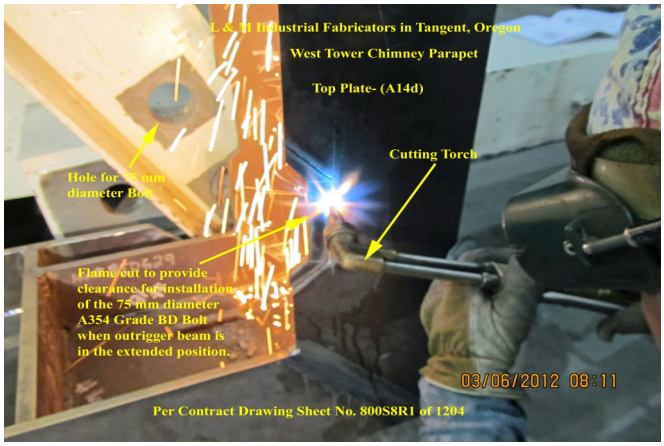
The welding operation was completed on these two (2) stiffener plates to wall plate- (A13b) and the workmanship on this date appeared to be in general compliance with the contract specifications.

This QA Inspector performed ultrasonic test (UT) verification inspection on the complete-joint penetration (CJP) corner-joint groove weld on the West Tower Chimney Parapet wall after Quality Control (QC) performed their final NDT as per CCO 196 and the contract specifications. The following UT was performed at the following weld location.
UT: Exterior Side of A12 Wall.

A12b- Wall plate to A12a- base plate CJP corner-joint groove weld - 10% of the weld length inside of QC's test area from "Y" location 440 mm ~ 903 mm.

The UT verification inspection performed on this date appeared to be in general compliance with AWS D1.5-2002

Table 6.3 for the 16 mm thick corner-joint weld. See TL-6027 Ultrasonic Test Report for further details of the UT inspection.



Summary of Conversations:

Only general conversations between this QA and QC on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Peterson,Art	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer